

REMARKS

By this Amendment, claim 1 is amended merely to clarify the recited subject matter. Claims 1-8 are pending.

The Office Action rejected claims 1-8 under 35 U.S.C. §102 (e) as being anticipated by Cloonan et al. (U.S. 5,724,352; hereafter “Cloonan”). Applicants traverse the rejection because Cloonan fails to disclose, teach or suggest all the features recited in the rejected claims.

For example, Cloonan fails to disclose, teach or suggest the claimed scheduling means including “determination means for determining a first set of said requests selected from the plurality of requests, according to said respective priority levels,” “a first pipeline stage for receiving only said first set of requests and satisfying at least one of the first set of requests”, “a priority mixer for determining a further set of said requests independently of said priority levels,” and “an additional pipeline stage for identifying requests in said further set which can be satisfied, and for satisfying the identified requests” as recited in independent claim 1 and its dependent claims.

In the claimed invention, only a first set of requests from the plurality of processed interconnection requests are received by the first pipeline stage. These requests are selected depending on their priority. To the contrary, the controller 24₀ of Cloonan receives all requests. Therefore, Cloonan fails to disclose, teach or suggest a first pipeline stage for receiving only a first set of the requests selected from a plurality of requests according to priority levels and satisfying at least one of the first set of requests, as recited in independent claim 1.

Additionally, the claimed invention includes a priority mixer and an additional pipeline stage for determining and satisfying requests independently of priority levels of the requests. However, the controller 24₁ of Cloonan satisfies requests according to priority levels, thus, performing the same function as controller 24₀. More specifically, in Cloonan, Figure 15 illustrates a series of requests being presented to pipe controllers (24₀-24₃) over a plurality of successive time intervals. These requests are categorized into eight distinct request groups : four poke groups (R_{ABCD}, R_{EFGH}, R_{IJKL}, R_{MNOP}), populated according to the input port associated with the request, wherein each poke group is further divided according to priority (R' and R'').

Cloonan (col. 9, line 16 – col. 10, line 9) actually teaches that the controller 20 uses a technique known as “rolling” when routing. Rolling gives rise to the particular timing and

order of the presentation of request groups to the various controllers illustrated in Figure 15. Figure 15 also shows that high priority request groups ($R^{'}$) are presented to a particular controller immediately before the corresponding low priority request groups ($R^{''}$). For example, in time interval $i,6$ high priority request group $R^{'}_{ABCD,i}$ is presented to controller 24_0 immediately followed at time interval $i,7$ by low priority request group $R^{''}_{ABCD,i}$.

As explained at column 22, lines 27 to 43, this ordering ("natural temporal ordering") inherently gives rise to prioritizing by allowing high priority requests to be satisfied first. Significantly, the controllers 24_0 - 24_3 of Cloonan function identically to each other and each controller (24_0 - 24_3) is presented with all request groups. Accordingly, requests are satisfied in the first controller 24_0 in accordance with priority levels of the requests ($R^{'}_{ABCD,i}$ presented before $R^{''}_{ABCD,i}$) and in the subsequent controllers 24_1 - 24_3 in accordance with priority levels of the requests.

The Office Action appears to have asserted that each group of requests presented to controller 24_0 in a particular time interval (e.g., $R^{''}_{ABCD,i}$ at time $i,7$) has a particular priority associated with it (i.e., low priority $R^{''}$), thereby meeting the claimed invention. The Office Action further asserted that Cloonan's controller 24_1 functions like the priority mixer of the claimed in that it allegedly included requests of the first set which were not satisfied (e.g., $R^{''}_{ABCD,i}$ at time $i,8$) and further requests that are of any priority level, independently of the priority levels. However, that assertion is incorrect because the ordering of the presentation of the request groups $R^{'}_{EFGH,i}$ and $R^{''}_{EFGH,i}$ (of different priority levels) necessarily means that the requests are prioritized according to priority levels.

Accordingly, Applicants submit that the controller 24_1 of Figure 15 fails to act like the priority mixer of the present invention, contrary to the Office Action's assertion at paragraph 5 on page 4. Cloonan's use of the phrase "natural temporal ordering" (column 22, lines 27-43) clearly would have indicated to one of ordinary skill in the art that requests are satisfied in the controller 24_1 according to priority, i.e., in direct contrast to the requirement of the claimed invention that the priority mixer and additional pipeline stage serve to determine and satisfy requests independently of priority levels.

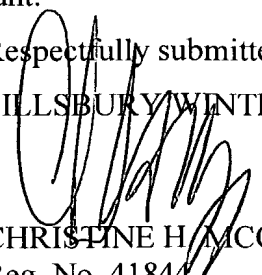
Accordingly, the subject matter of independent claim 1 and its dependent claims 2-8 are patentable over Cloonan. Claims 1-8 are allowable.

All prior art rejections having been traversed, Applicants submit that the application is in condition for immediate allowance and requests that a Notice be issued to that effect. If

anything remains necessary to place the application in condition for allowance, Applicants request that the Examiner contact Applicants' undersigned representative.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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